

Common Knee Conditions Requiring Surgery

Understanding knee conditions is essential for individuals to effectively manage their health and make informed decisions about treatment and preventive measures. Common knee conditions encompass a range of issues such as osteoarthritis, meniscal tears, ACL injuries, patellar tendonitis, and patellofemoral pain syndrome. These conditions can cause symptoms like pain, stiffness, swelling, and reduced mobility, significantly impacting an individual's quality of life.

By having an overview of these common knee conditions, individuals can recognise symptoms early, seek appropriate medical attention of [Knee Specialist in Singapore](#), and explore treatment options tailored to their specific needs. Additionally, understanding these conditions enables individuals to adopt preventive measures and lifestyle modifications to mitigate the risk of knee problems in the future.

Osteoarthritis of the Knee

Osteoarthritis of the knee is a degenerative joint disease characterised by the gradual breakdown of the cartilage that cushions the ends of the bones within the knee joint. This deterioration can result from various factors, including ageing, repetitive stress on the knee joint, previous injuries, obesity, genetics, and metabolic disorders.

Symptoms and Diagnosis

The symptoms of knee osteoarthritis typically include pain, stiffness, swelling, and decreased range of motion in the affected knee.

Diagnosis often involves a thorough physical examination by a healthcare professional, including evaluation of symptoms and medical history. Imaging tests such as X-rays, magnetic resonance imaging (MRI), or computed tomography (CT) scans may also be utilised to assess the extent of cartilage damage and confirm the diagnosis.

Surgical Treatment Options

When conservative treatments fail to provide adequate relief, surgical interventions may be considered to address knee osteoarthritis. Common surgical options include arthroscopic procedures to remove damaged tissue, osteotomy to realign the bones of the knee joint, or partial or total knee replacement surgery.

These surgical approaches aim to alleviate pain, improve joint function, and enhance the overall quality of life for individuals with knee osteoarthritis, particularly in cases where conservative measures have proven ineffective.

Meniscal Tears

Meniscal tears are common knee injuries that occur when the cartilage-like structures, known as menisci, tear due to sudden twisting or forceful rotation of the knee joint. These tears can result from traumatic events, such as sports injuries or accidents, as well as degenerative changes associated with ageing or repetitive stress on the knee joint.

Symptoms and Diagnosis

Symptoms of a meniscal tear often include pain, swelling, stiffness, and difficulty moving the knee joint, particularly during activities that involve bending or twisting. Diagnosis typically involves a combination of medical history, physical examination, and imaging tests such as MRI or ultrasound to visualise the extent and location of the tear.

Surgical Treatment Options

In cases where conservative treatments like rest, ice, physiotherapy, and pain management do not provide adequate relief, surgical intervention may be necessary to repair or remove the damaged meniscus. Surgical options include arthroscopic meniscal repair, where the torn meniscus is stitched back together, or partial meniscectomy, where the torn portion of the meniscus is removed.

The choice of surgical technique depends on various factors, including the size, location, and severity of the tear, as well as the individual's age, activity level, and overall knee health. The goal of surgical treatment is to alleviate symptoms, restore knee function, and prevent long-term complications such as osteoarthritis.

Anterior Cruciate Ligament (ACL) Injury

An anterior cruciate ligament (ACL) injury occurs when the ACL, one of the major ligaments in the knee, is stretched, partially torn, or completely ruptured. These injuries often result from sudden stops or changes in direction, direct blows to the knee, or hyperextension of the knee joint during activities like sports or accidents.

ACL injuries can range from mild strains to complete tears and are more common in athletes participating in high-demand sports such as soccer, basketball, and football.

Symptoms and Diagnosis

Symptoms of an ACL injury include a popping sensation at the time of injury, severe pain and swelling in the knee, instability or a feeling of giving way, and difficulty bearing weight on the affected leg. Diagnosis typically involves a physical examination to assess knee stability, along with imaging tests such as MRI to confirm the extent and severity of the ACL injury and evaluate for associated damage to other knee structures, such as meniscal tears or cartilage damage.

Surgical Treatment Options

Surgical intervention is often recommended for individuals with a complete ACL tear or those who experience persistent symptoms despite conservative treatments. The most common surgical technique for ACL reconstruction involves replacing the torn ligament with a graft, typically obtained from the patient's hamstring tendon, patellar tendon, or donor tissue (allograft).

During the procedure, the surgeon drills tunnels in the femur and tibia bones to secure the graft in place, restoring knee stability and function. Other surgical options may include ACL repair techniques for select cases of partial ACL tears or minimally invasive arthroscopic procedures. The choice of surgical approach depends on various factors, including the patient's age, activity level, extent of injury, associated knee injuries, and surgeon preference.

Following surgery, rehabilitation and physiotherapy are essential components of ACL injury management to regain strength, range of motion, and functional stability of the knee joint.

Patellar Tendonitis (Jumper's Knee)

Patellar tendonitis, commonly known as jumper's knee, is a condition characterised by inflammation and degeneration of the patellar tendon, which connects the kneecap (patella) to the shinbone (tibia). It often occurs due to repetitive stress or overuse of the knee joint, particularly in activities that involve jumping or sudden changes in direction, such as basketball, volleyball, or running.

Risk factors for developing patellar tendonitis include participating in sports that place excessive strain on the knee, improper training techniques, inadequate warm-up or stretching routines, and biomechanical factors such as leg length discrepancies or foot alignment issues.

Symptoms and Diagnosis

The main symptom of patellar tendonitis is pain and tenderness around the patellar tendon, typically located just below the kneecap. Pain may worsen with activity, especially jumping or squatting motions, and may improve with rest. Other common symptoms include stiffness, swelling, and aching in the knee joint.

Diagnosis is usually based on a thorough physical examination, where the healthcare provider assesses for localised tenderness, swelling, and range of motion of the knee. Imaging studies such as ultrasound or MRI may be ordered to confirm the diagnosis and evaluate the extent of tendon damage.

Surgical Treatment Options

In cases where conservative treatments such as rest, ice, physiotherapy, and anti-inflammatory medications fail to alleviate symptoms and improve function, surgical intervention may be considered. Surgical options for patellar tendonitis typically involve procedures aimed at repairing or reinforcing the damaged tendon tissue to promote healing and restore function.

Common surgical techniques include arthroscopic debridement, where the surgeon removes degenerated tissue and stimulates the growth of healthy tissue. Another option is patellar tendon repair or augmentation procedures, where the tendon is surgically reattached to the patella or reinforced with grafts or synthetic materials.

The choice of surgical approach depends on the severity of the tendon injury, the patient's activity level and goals, and the surgeon's expertise. Following surgery, a structured rehabilitation program is essential to facilitate healing, restore strength and flexibility, and gradually reintroduce activities to prevent the recurrence of patellar tendonitis.

Patellofemoral Pain Syndrome

Patellofemoral pain syndrome (PFPS), also known as runner's knee, is a common knee condition characterised by pain around or behind the kneecap (patella). It typically occurs when the patella fails to move smoothly along the groove at the end of the thigh bone (femur) during knee movements.

PFPS can result from various factors, including overuse or repetitive stress on the knee joint, muscle imbalances or weakness around the knee, improper alignment of the patella, and biomechanical issues such as flat feet or tightness in the iliotibial (IT) band. Activities that involve running, jumping, squatting, or climbing stairs may exacerbate symptoms of PFPS.

Symptoms and Diagnosis

The primary symptom of PFPS is dull, aching pain around or beneath the kneecap, which may worsen with activities that load the knee joint, such as running, kneeling, or prolonged sitting with bent knees. Patients may also experience a grinding sensation or clicking noises when moving the knee.

Diagnosis of PFPS is typically based on a thorough physical examination, where the healthcare provider assesses for tenderness around the patella, checks for signs of malalignment or muscle weakness, and evaluates knee range of motion and joint stability. Imaging studies such as X-rays or MRI scans may be ordered to rule out other potential causes of knee pain and confirm the diagnosis of PFPS.

Surgical Treatment Options

In most cases, conservative treatments such as rest, activity modification, physiotherapy, and nonsteroidal anti-inflammatory drugs (NSAIDs) are sufficient to manage symptoms of PFPS and improve knee function. However, in refractory cases where conservative measures fail to provide relief, surgical intervention may be considered.

Surgical options for PFPS aim to address underlying anatomical abnormalities or structural issues contributing to patellar malalignment or instability. Common surgical procedures include arthroscopic techniques to release tight structures, realign the patella, or remove damaged cartilage or soft tissue around the knee joint. In severe cases of PFPS with significant patellar instability or

cartilage damage, more extensive surgical procedures such as patellar realignment or cartilage restoration techniques may be necessary.

The choice of surgical approach depends on the specific needs and goals of the patient, as well as the severity and chronicity of PFPS symptoms. Following surgery, a comprehensive rehabilitation program is crucial to optimise outcomes, restore knee function, and prevent the recurrence of symptoms.

Key Takeaways

In summary, knowing about common knee conditions like osteoarthritis, meniscal tears, ACL injuries, patellar tendonitis, and patellofemoral pain syndrome is vital. Early detection and proper treatment are key to managing these issues and preventing complications.

Patients should seek medical help promptly to explore various treatment options by [BJC Knee Doctor in Singapore](#), ranging from conservative approaches like therapy and medication to surgical solutions when necessary. Tailored treatment plans, based on the severity of the condition and individual needs, are essential for optimal outcomes. Collaboration between patients and healthcare providers is crucial for effective management and a return to an active lifestyle.